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REPORT

OF THE

ENGINEER AND SUPERINTENDENT

OF THE

ROAD TO AVOID THE INCLINED PLANES

ON THE

ALLEGHENY PORTAGE RAILROAD,

FOR THE FISCAL YEAR ENDING NOVEMBER 30, 1854.

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REPORT.

To the Hon. Board of Canal Commissioners of the Commonwealth of Pennsylvania:

GENTLEMEN:—I respectfully submit the following statement of the condition of the work on the road to avoid the inclined planes of the Allegheny Portage railroad, at the close of the fiscal year ending November 30, 1854.

All the grading contemplated on the long level, a distance of seven and forty-six one-hundredth miles, is finished; the ballast and cross-ties are being furnished, and the track laying will be commenced within two weeks, and pushed forward vigorously to completion. The new track will be entirely completed on this part of the line before the opening of navigation in the spring, which will enable the largest class locomotives to run from the foot of plane No. 4, to Conemaugh station, thus avoiding the change of power now necessary in working the road, and effecting a large economy in the transportation.

From the intersection of the new line with the long level, to the foot of plane No. 4, the new road was in successful operation at the date of my last report, and has since been in constant use. This experiment has proved the plan adopted for the superstructure an excellent one, and though costing something more than the track commonly used, it is believed that it will ultimately be found the most economical.

From the foot of plane No. 4, to the open cut at the western approach of the tunnel, a distance of six miles, the grading is entirely completed, the ballast nearly all on, and a portion of the cross ties delivered. The track on this part of the line may be put down within two months, but no effort is being made to advance this part of the work, as from its position, it cannot be brought into use until the whole line is completed.

From the point where the new road crosses the old, between planes No. 8 and 9, to the intersection with the Hollidaysburg level, near Duncansville, a distance of about six and one-half miles, the grading is all completed except a small amount on sections No. 36 and 37, which will be finished by about the first of February next. The ballast is nearly all furnished on this part of the line, and a portion of the cross-ties delivered; there can, therefore, be no doubt but the track will be put down, and the road ready for the locomotive, on or before the opening of navigation in the spring of 1855.

The completion of this division of the road will avoid planes No. 9 and 10, and thus remove two more of the serious obstacles in the way of cheap and rapid transportation on the main line.

The balance of the road embraces part of section No. 20, sections No. 21 to 32 inclusive, and a part of section No. 33, a distance of about eight and one-fourth miles. Section No. 23, and sections No. 27 to 31 inclusive, are graded, and the ballast furnished on section No. 27.

The other sections on this division, judging from their present rate of progress, will be finished on or before the first day of April next, with the excep-

tion of sections No. 20, 21 and 32. These latter sections will not be completed before June next, so that the whole road avoiding all the planes cannot now be brought into use before sometime in July, 1855.

In my report for the fiscal year ending Nov. 30, 1853, I stated that the work generally was in such a state of forwardness, that it might be completed during the year 1854 with great ease. At that time there seemed no good reason to doubt such a result, as a much larger amount of work had frequently been finished in a shorter period of time. The previous appropriation was exhausted early in the fall of 1853, so that during the winter following, the work could not be urged forward vigorously, as the contractors were obliged to carry it on with their individual means; but the principal delay was caused by legislative action. The Legislature of 1854 passed a bill offering the main line for sale, up to the first Monday in July of that year, at a minimum price of ten millions of dollars. No provision was made for adding to that sum, the amount subsequently expended by the State, so that if the works were sold, the expenditures, between the passage of the act and the first Monday of the following July, would be entirely lost to the Commonwealth. Under these circumstances it was not deemed expedient to push forward the work until the question of sale was determined. The consequence was that no effort was made in the spring to augment the winter forces, and by the first of July, the unengaged hands on the mountain had found employment elsewhere; and on some of the sections the contractors have not been able to collect a full supply of laborers since. The large demand for labor every where, during the summer months, contributed also to this result.

The ultimate cost of the road will be largely increased over my former estimate, from causes which I will proceed to enumerate.

When the tunnel was originally put under contract, no provision was made for arching, because until the material through which it passed had been explored, it was impossible to determine how much arching would be required. In the summer of 1853, however, the tunnel was found to pass through the perishable shales of the coal region for its entire length, and it became evident that it would require arching throughout; but the previous appropriation being insufficient to complete existing contracts, the Board decided not to add anything to the responsibilities of the Commonwealth, until further means were provided. This and the subsequent legislative action before referred to, put off the letting of this work until July, 1854.

During this long delay, the disintegrating action of the elements, caused large masses to fall from the roof of the tunnel, which has not only to be taken out, but the space to be refilled to support the superincumbent materials. Large additions to the propings became also necessary, and additional strength to the arch itself. Judging from what has already occurred, the additional cost of the tunnel from this source, will not fall much short of *sixty thousand dollars*

In the original plan the arch was designed to abut against the natural rock at the sides of the tunnel, but from the perishable nature of the material, it is now believed that side walls will be necessary. This will add *twenty thousand five hundred dollars* more to the ultimate cost.

During the past spring and summer, heavy slides have occurred on sections No. 20, 22, 26, 32, 36, 37 and 38, together with minor ones on several other sections. These occurrences could not have been anticipated, and were not included in the estimate. The amount added to the cost of the work from these causes, is estimated at *thirty-five thousand dollars*.

The failure to complete the new road by the opening of navigation in the Spring, will throw the cost of what would otherwise have been repairs for the next year into the construction account, which was not anticipated. All experience proves that the cost of repairs on a new road is very heavy during the first year, especially when deep cuttings and embankments occur as upon

the Portage road. The cost of this item is estimated at *twenty-two thousand dollars.*

At the date of my last report, a contract for iron rails was in existence with the Montour iron company, upon which there was due over one thousand tons, to be delivered when required. This amount they have since refused to furnish, and the difference between their contract, and the price subsequently paid, will be about *twenty-five thousand dollars*, which must be recovered from them or otherwise provided for.

In the fall of 1853, there seemed to be every indication that the price of railroad iron had reached its maximum, and would decline before spring. My estimate was based upon this supposition, but the rates kept up unaccountably, and the price subsequently paid exceeded my estimate on the amount required—above the one thousand tons before alluded to—by *twenty-two thousand seven hundred and sixty dollars*. This apparent difference, however, is not by any means lost to the Commonwealth. The contract for new rails requires the manufacturers to roll the old iron of the Portage, as far as it can be delivered in advance into the new, which will make a very superior rail, better than is now manufactured in the country.

Iron purchased for the new road has been used from time to time in the repairs of the old Portage, and as the new road cannot be brought into use by the opening of navigation next spring, the amount used between the connection, near the foot of plane No. 4, and the intersection of the new and old roads, between planes No. 8 and 9, cannot be made available for the first track of the new road, but must be supplied from other sources.

The quantity thus rendered unavailable is three hundred and twenty-one tons, which at the late contract price will amount to *twenty-two thousand four hundred and seventy dollars.* The iron is not lost, but may be sold after the new road is brought into use, and the amount returned into the coffers of the State, or it may be used advantageously in renewing and improving the tracks at the termini of the road.

In my former report I used the value of the old materials as previously estimated, deducting therefrom the amount received, and carrying the balance to the credit of the new road.

Upon a recent examination I find that the amount that can be realized from the sale of the old materials on that portion of the old road, thrown out of use by the opening of the new, will fall short of the original estimate by *sixty thousand dollars.*

To the foregoing items these must be added for errors and contingencies not otherwise accounted for, *ten thousand dollars*, and the aggregate will show the amount required to secure the opening of the road by July, 1855, as exhibited in the summary annexed:

SUMMARY.

Extra cost of tunnel on original plan	$60,000 00
Side walls of do., since added	20,500 00
Slides, &c., on various sections during the past year	35,000 00
Slides estimated for next year	22,000 00
Cost of iron above price of Montour company	25,000 00
Cost of balance of iron over estimated	22,760 00
Unavailable iron on old Portage road	22,470 00
Deficiency in estimate of old materials	60,000 00
Errors and contingencies, estimated	10,000 00
Amount still required	277,730 00

The following statement will exhibit more fully the financial condition of the road:

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Amount required to complete the grading, including the tunnel	$176,500 00	
Amount due contractors, including retained per centage	99,397 00	
Amount required to complete the superstructure with sidings	287,170 00	
		$563,067 00

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Amount of appropriation May 9, 1854, unexpended	$155,283 00	
Estimated value of available old materials	130,054 00	
Amount still required as above	277 730 00	
		$563,067 00

The amounts expended annually in perpetuating the inclined planes of the old Portage road, have been so enormous that persons at a distance seem not to consider it as a short link in a great chain of improvement stretched across a mountain, but as some vast malstrom, which is to swallow up in the future the entire revenues of the Commonwealth! Hence, the desire manifested in some quarters to sell the main line, and thus avert so dire a calamity! In addition to this, the distinction is not properly drawn between the new and old roads; the two, in the minds of many, are confounded. Even members of the Legislature, when discussing the propriety of making appropriations to the new road, often talk of the "corruptions, mismanagement, and fraud" *alledged* to be practiced on the old, as an argument against granting any further supplies. They do not seem to realize the fact, that the large expenditures of which they complain are due to the defective plan of construction and worn out condition of the *old road*, and that the only way of reducing the expenses to a reasonable limit, and of instituting a sound and salutary system of reform in the management, is to avoid the inclined planes, thus getting rid of the frequent changes of power, and all the other causes which serve to perpetuate the system they deprecate.

In my last report it was clearly demonstrated that the cost of working the old Portage road with its ten inclined planes, was at least three times what would be required to transport the same amount of freight over a road of the same length without inclined planes.

This large difference will more than pay the interest on the cost of constructing the new road, besides increasing so largely the facilities for transportation, and thus adding to the general business of the Commonwealth. Another advantage to be derived from opening the new road, is that it will add largely to the business of the Eastern division of the Pennsylvania canal, by affording increased facilities for the transportation of coal from the Alleghenies to the eastern markets. The new road traverses "Sugar run" for a distance of about three miles, in which distance it cuts through the entire coal measures of the mountain. Several different companies and individual owners having large sums invested in these mines, are now only awaiting the opening of the new road to commence a large business in mining and shipping to the eastern markets, the coal and iron of this region. The canal will always command this trade, because it can be transported cheaper than upon railroads, as demonstrated by all past experience.

The advantages to be derived from the opening of the road avoiding all the planes of the Allegheny Portage railroad, are of such commanding im-

portance, that even the large amount required for its construction sinks into insignificance in the comparison.

Immense sums have been expended by New York on our northern borders, and Maryland on our southern, for the purpose of opening avenues commensurate with the magnitude of the growing trade of the west, seeking the Atlantic seaboard. The new roads are constructed with all the modern improvements, and every effort is made by each to surpass the other in the facilities afforded for cheap and rapid transportation.

In view of these rival routes, it is no longer a question of expediency, but a question of necessity. Pennsylvania *must discard the old*, and keep pace with the advancement of her neighbors, or loose entirely the advantages which her geographical position gives her. She must improve the present, or give up all hope of the future. She must enter the lists, clothed in the armor forged by the genius of the hour, or she will be surely beaten.

Very respectfully,

T. G. POMEROY, *Engineer.*

To the Board of Canal Commissioners:

GENTLEMEN:—Since entering upon the duties of Superintendent of the road to avoid the inclined planes, contracts have been entered into as follows:

With George Murray for grading, furnishing the cross-ties, ballasting, and laying the track on about four miles of the long level, next east of the mouth of the South fork of the Conemaugh.

Also, with Messrs. Huyett, Neff & Co., Snodgrass and M'Ginley, M'Ginley, Huff and Corell, Adam Moses, Patrick Doran, and W. M. Wiley & Co., for furnishing the cross-ties and ballast, and laying the track from the foot of plane No. 4, to the intersection of the new road with the Hollidaysburg level, a distance of about twenty-one miles.

Also, with John Fries for furnishing all the cut stone, and Glover & Wiley for furnishing all the brick that may be required for arching the tunnel on section No. 21 of said road.

Also, with the Cambria Iron Co., for furnishing all the iron rails required for a single track and sidings, and for the sale of the remaining old iron on the old Portage railroad, to be delivered as fast as thrown out of use by the construction of the new road.

The amount of money drawn from the Treasury, and the amount of expenditures during the fiscal year, ending November 30, 1854, is as follows, viz:

Amount drawn as per act of 15th April, 1851.....	$6,421 03
Amount drawn as per act of 9th May, 1854.....	450,500 00
Total.....	456,921 03
Disbursements, as per vouchers filed.....	456,915 91
Amount in hand.....	5 12

Respectfully submitted,

T. G. POMROY,
Superintendent.